

USER GUIDE

AXIS T8640 Ethernet Over Coax Adaptor PoE+

ENGLISH

Electromagnetic Compatibility (EMC)

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Re-orient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment to an outlet on a different circuit to the receiver. Consult your dealer or an experienced radio/TV technician for help. Shielded (STP) network cables must be used with this unit to ensure compliance with EMC standards.

CLASS B USA:

This equipment has been tested using a shielded network cable (STP) and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

CLASS B Europe

This digital equipment fulfills the requirements for RF emission according to the Class B limit of EN 55022 when PoE powered.

CLASS A Europe

This digital equipment fulfills the requirements for RF emission according to the Class A limit of EN 55022 when DC powered.

EN 55024

This product fulfills the requirements for immunity according to EN 55024 office and commercial environments.

Equipment Modifications

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. This equipment contains no user-serviceable components. Unauthorized equipment changes or modifications will invalidate all applicable regulatory certifications and approvals.

Liability

Every care has been taken in the preparation of this document. Please inform your local Axis office of any inaccuracies or omissions. Axis Communications AB cannot be held responsible for any technical or typographical errors and reserves the right to make changes to the product and documentation without prior notice. Axis Communications AB makes no warranty of any kind with regard to the material contained within this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Axis Communications AB shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance or use of this material.

RoHS

This product complies with both the European RoHS directive, 2002/95/EC, and the Chinese RoHS regulations, ACPEIP.



WEEE Directive

The European Union has enacted a Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE Directive). This directive is applicable in the European Union member states.

The WEEE marking on this product (see right) or its documentation indicates that the product must not be disposed of together with household waste. To prevent possible harm to human health and/or the environment, the



product must be disposed of in an approved and environmentally safe recycling process. For further information on how to dispose of this product correctly, contact the product supplier, or the local authority responsible for waste disposal in your area.

Business users should contact the product supplier for information on how to dispose of this product correctly. This product should not be mixed with other commercial waste. For more information, visit www.axis.com/techsup/.

Support

Should you require any technical assistance, please contact your Axis reseller. If your questions cannot be answered immediately, your reseller will forward your queries through the appropriate channels to ensure a rapid response. If you are connected to the Internet, you can:

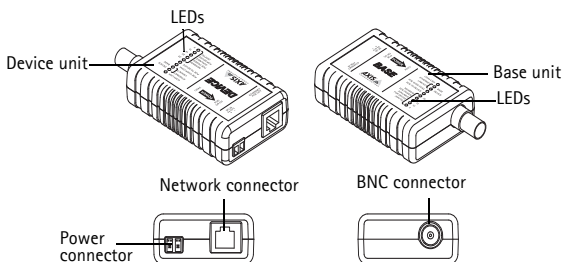
- download user documentation and firmware updates
- find answers to problems in the FAQ database. Search by product, category, phrases.
- report problems to Axis support by logging in to your private support area.

AXIS T8640 Ethernet Over Coax Adaptor PoE+ User Guide

Package Contents

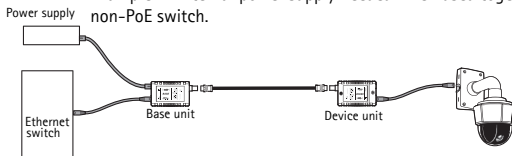
Item	Models/variants/notes
Ethernet Over Coax Adaptor PoE+	AXIS T8640: <ul style="list-style-type: none"> AXIS T8641 Ethernet Over Coax Base Unit PoE+ AXIS T8642 Ethernet Over Coax Device Unit PoE+
Optional accessories	AXIS T8003 PS57 (Power supply) DIN Rail clip Wall bracket Rack mount bracket
Printed Materials	AXIS T8640 User Guide (this document) Axis Warranty Document

Hardware Overview

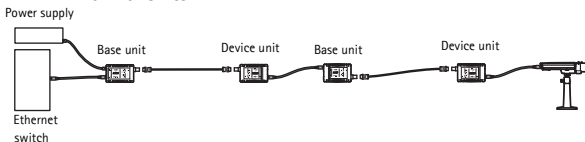


Hardware Overview – Configuration Examples

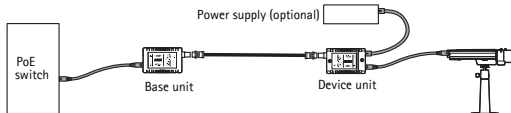
Example 1. External power supply needed when used together with non-PoE switch.



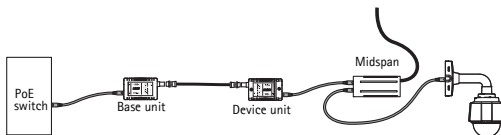
Example 2. External power supply needed when used together with non-PoE switch.



Example 3. PoE powered solution (optional power supply needed when used together with low quality cables)



Example 4. PoE devices higher than class 4 require additional midspan.



LED Indicators

LED	Behavior/color	Indication
Coax link	Off	No power
	On	Connection established
	Flash	Units not detected on coax
	Orange/red	Data rate < 100%. The coax connection has reached power and range limit. Reduce cable distance or connect an AXIS T8003 PS57 supply to the Device unit.
Ethernet link	Off	No network connection
	On	Ethernet link established
	Flash	Network activity on port
	Red	10BASE-T connection. Units must be connected to 100BASE-T (full-duplex) compatible equipment for effective operation.
PoE over coax	Off	Units not detected
	On	PoE over Coax enabled
	Red (1 flash)	Low voltage. Check power supply type/polarity.
	Red (2 flashes)	Short circuit. Check for cable faults and remove legacy video equipment.
	Red (3 flashes)	Power disconnected due to overload.
Max PoE power available for camera (Watts)	On	Max PoE power that can be reliably delivered from 5 to 25 watts.
	Flash	Less than 5 watts of PoE available.
	Orange (flashing)	Approaching power limit
	Red (flashing)	Power limit reached. See note below.

Note:

- Available power is specific to the cable length, type, and power source used, and is calculated automatically on connection. For example, to ensure reliable power delivery to a PoE IP camera whose maximum power requirement is 12 watts, check that the 15 watt LED is lit.
- If installing a PTZ camera, or any equipment whose power requirement can change, check these LEDs while the equipment is drawing peak power, such as when the PTZ camera is moving.
- For maximum PoE over coax power, connect an AXIS T8003 PS57 power supply to the Base unit. If more power is required than the cable can carry, the power supply can be connected to the Device unit.

Technical Specifications

Item	Specifications
Model	AXIS T8640: <ul style="list-style-type: none"> • AXIS T8641 Ethernet Over Coax Base Unit PoE+ • AXIS T8642 Ethernet Over Coax Device Unit PoE+
Data rate	Coaxial cable: 100Mbps Full Duplex Ethernet cable: 100Base-TX Full Duplex
Connectors	Coaxial: BNC 75 Ohm Ethernet: Shielded RJ-45, EIA 568A and 568B
Network cables	<ul style="list-style-type: none"> • Coaxial: Any 75 Ohm coaxial (other impedances supported), to 500 m /1600 ft. at full rate • Ethernet: Shielded category 5 (or higher); (patch or cross-over, auto-detected)
Output power	AXIS T8641: PoE over Coax with safe auto-detection and autocutout AXIS T8642: PoE (IEEE 802.3af/at) enabled to detected devices up to 25.5 W
Input power	<ul style="list-style-type: none"> • AXIS T8641: PoE (IEEE 802.3at Class 4 powered device) or DC power supply • AXIS T8642: PoE over Coax or DC power supply • DC Power supply: AXIS T8003 PS57 or 44 - 56V DC Class 2 isolated supply (max 0.7 amps) • Device power: 1.5 W
Installation/management	Plug-and-play installation; automatically detects PoE and High PoE-enabled devices and supplies in-line power Local LED management display
Compliance	IEEE 802.3at, IEEE 802.3af, RoHS, WEEE, CE
Mounting	Wall, rack, DIN Rail
Environment	Indoor

Item	Specifications
Approvals	FCC part 15, Class B with FTP cabling EN 55022 Class B (Emissions, PoE powered) EN 55022 Class A (Emissions, DC powered) EN 55024 (Immunity)
Operating conditions	-10 °C to 50 °C (14 °F to 122 °F) Humidity max. 95% RH (non-condensing)
Storage	-40 °C to 74 °C (-40 °F to 165 °F)
Dimension (HxWxD)	104 x 54 x 24 mm (4.1" x 2.1" x 0.9)
Weight	140 g (0.3 lbs)
Optional accessories	AXIS T8003 PS57 Power supply, DIN Rail Clip, Wall Mount Bracket, Rack Mount Bracket

Examples of Power Source for:

Low power PoE Network cameras (PoE IEEE 802.3af Class 1, or 2; < 6 watts)

- AXIS M11 Network Camera Series
- AXIS 221 Network Camera
- AXIS M30 Network Camera Series
- AXIS M32 Network Camera Series
- AXIS M31-R/VE Network Camera Series
- AXIS P33 Network Cameras (indoor models)
- AXIS 212 PTZ/-V Network Camera

Using an 802.3af PoE switch	Using AXIS T8003 PS57
150m (492 ft.) of CCS RG-59	280m (919 ft.) of CCS RG-59
350m (1148 ft.) of CC RG-59	350m (1148 ft.) of CC RG-59
400m (1312 ft.) of CC RG-6	400m (1312 ft.) of CC RG-6
500m (1640 ft.) of CC RG-11	500m (1640 ft.) of CC RG-11

Note: CC = Copper-Cored Cable (most common for correctly installed analog video) CCS = 22AWG Copper-Coated Steel (shows worst-case performance if cable type is not known)

Examples of Power Source for:

Medium power PoE Network cameras (PoE IEEE 802.3af Class 1, 2 or 3; <10 watts)

- AXIS M1054 Network Camera
- AXIS P13 Network Cameras (indoor models)
- AXIS Q16 Network Cameras (indoor models)
- AXIS Q1755 Network Camera
- AXIS Q19 Network Camera Series
- AXIS P33-VE Network Cameras

Using an 802.3af PoE switch	Using AXIS T8003 PS57
CCS RG-59 not supported 350m (1148 ft.) of CC RG-59 400m (1312 ft.) of CC RG-6 500m (1640 ft.) of CC RG-11	200m (656 ft.) of CCS RG-59 350m (1148 ft.) of CC RG-59 400m (1312 ft.) of CC RG-6 500m (1640 ft.) of CC RG-11

Examples of Power Source for:

Full power PoE or PoE+ Network cameras (PoE IEEE 802.3af Class 3; >10 watts) or IEEE 802.3at.

- AXIS P13-E Network Cameras
- AXIS Q16-E Network Cameras
- AXIS Q1755-E Network Camera
- AXIS P55 Network Camera Series
- AXIS Q60 Network Cameras (indoor models)

Using an 802.3af PoE switch	Using AXIS T8003 PS57
Not supported	80m (262 ft.) of CCS RG-59 350m (1148 ft.) of CC RG-59 400m (1312 ft.) of CC RG-6 500m (1640 ft.) of CC RG-11

Examples of Power Source for:

Custom High PoE Network cameras that use AXIS T8124 High PoE 60 W Midspan 1-port such as the AXIS Q60-E Network Cameras.

Using an 802.3af PoE switch	Using AXIS T8003 PS57
PoE to the camera is not supported. The AXIS T8642 Device can be powered over the coaxial cable, but an AXIS T8124 60 W midspan must be used to power the camera locally.	

Note:

- The actual range depends on several factors such as cable quality, cable thickness, connectors and camera power consumption.
- Range figures assume short (<5 m or 16 ft.) Cat-5e cables between equipment.
- CC - Copper-Cored Cable (most common for correctly installed analog video)
CCS - 22AWG Copper-Coated Steel (shows worst-case performance if cable type is not known)

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PoE+

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Ver.1.0

Printed: June 2012

Part No. 46660